

IED GLOBALCOM

Installation Instructions IED Announcement Control System

IED1100 / IED1200



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IMPORTANT SAFETY INSTRUCTIONS

<ol style="list-style-type: none"> 1. Read these instructions. 2. Keep these instructions. 3. Heed all warnings. 4. Follow all instructions. 5. Do not use this apparatus near water. 6. Clean only with dry cloth. 7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions. 8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. 9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet. 10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus. 11. Only use attachments/accessories specified by the manufacturer. 	<ol style="list-style-type: none"> 12.  Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over. 13. Unplug this apparatus during lightning storms or when unused for long periods of time. 14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped. <div data-bbox="889 724 1398 968">  <p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED PERSONNEL</p> </div>
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WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain, moisture, dripping, splashing, or place objects filled with liquids on the equipment.

WARNING: If apparatus is equipped with Class I grounding plugs for safety purposes, it must be connected to MAINS that employ a protective earth ground connection.

WARNING: The MAINS plug on this device may be used as the DISCONNECT DEVICE for MAINS power and must remain readily operable.

WARNING: Installation and maintenance of IED equipment is to be made by trained/qualified personnel and must conform to all applicable local codes.

WARNING: If unit contains a lithium battery, there is a danger of explosion. Replace only with the same or equivalent type.

SAFETY SYMBOLS

Labeling on products and the *Installation Instructions & User Manual* may use safety related graphical symbols as shown below to note safety requirements.



Lightning Bolt: The lightning flash with arrowhead symbol, within an equilateral triangle, WARNING symbol, is intended to alert the user to the presence of uninsulated **dangerous voltage** within the product's enclosure that may be sufficient in magnitude to constitute a risk of electric shock to persons or domestic animals.



Exclamation Point: The exclamation point within an equilateral triangle, CAUTION symbol, is intended to alert the user to the presence of important operating and maintenance (servicing) instructions, or a hazard that can damage equipment.



Do not proceed beyond a WARNING or CAUTION notice until you have understood the hazardous condition and have taken appropriate steps.

Ne continuez pas avant d'avoir pris connaissance du danger et prendre les mesures appropriées.

SAFETY CONSIDERATIONS

SAFETY PRECAUTIONS

Personnel properly qualified in the application and use of life safety equipment ("qualified personnel") shall read this manual carefully before performing any actions to specify, apply, install, maintain and perform operational tests of IED systems, and associated products in accordance with the instructions in this manual. This manual shall be made available to all qualified personnel who operate, test, maintain, or service IED systems, and associated products. It is strongly recommend that such personnel read and understand the entire manual.

WARNING: IF SAFETY PRECAUTIONS, INSTALLATION AND TESTING ARE NOT PERFORMED PROPERLY, CONDITIONS COULD EXIST IN WHICH THE IED SYSTEM MAY NOT OPERATE, OR MAY OPERATE IMPROPERLY. THIS COULD RESULT IN PROPERTY DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

It is very important that only responsible, trained personnel are allowed to operate and maintain these systems, and that they use only appropriate equipment and tools. If a person is not trained, they shall contact the IED factory for direction on how to operate and maintain an IED system.

Unauthorized personnel and equipment must be restricted from the areas of operation.

All operations should be performed carefully, methodically, and without hurrying. Greater effectiveness will be developed by increased familiarity of personnel with their assignments. During any maintenance operation, if a malfunction occurs or an incorrect indication appears, stop the operation and determine whether or not it is safe to proceed. Before performing any step in a procedure, be sure that the preceding step has been properly executed and correct results obtained. Cleanliness and good housekeeping in all installation areas are major factors in effective accident prevention. Tools and equipment should be maintained in good working order and should always be returned to their proper storage place after usage. Cleaning agents and other cleaning aids should be removed from the equipment areas immediately upon completing the task at hand.

GENERAL PRECAUTIONS

Changes, modifications, or additions in connection with the IED system equipment shall not be made without explicit authorization of IED.

Safety devices found on mechanical, and electrical and electronic equipment are put there for the protection of personnel and equipment. These devices must be maintained in good working order and operative at all times. Safety devices shall never be removed or bypassed unless specifically authorized by the IED factory. Where safety devices have been rendered inoperable by proper and specific authorization, adequate notices shall be posted to warn personnel of the potential hazard.

Avoid the use of flammable or toxic cleaning fluids, and the use of carbon tetrachloride is prohibited.

Maintenance of the equipment shall be at least what is specified in the IED manuals and literature, and performed only by qualified personnel.

Whenever operation and maintenance is ongoing, personnel in the equipment areas shall have an effective communication among these areas in order to protect people if any accident occurs.

PRELIMINARY PRECAUTIONS

Precautions which are applicable to general electrical or electronic maintenance are as follows:

- a. Check yourself. Wear no article that might catch on equipment or that might act as a conductor.
- b. Check the working area. The equipment area shall be clean and dry. If possible, stand on a special insulator such as a rubber mat. There should be ample working space and good lighting.
- c. Check the tools. Always use proper tools and check them for their safe condition. Use screwdrivers with plastic handles. Check test equipment periodically and examine test leads carefully as the slightest break in insulation is dangerous.

- d. Check the procedures. Study the entire procedure before taking the first step. Consult the circuit diagram frequently to obtain an understanding of what is accomplished at each step. Know what is in the equipment and how it differs from others on which you have worked.
- e. Be aware that high voltages may be present across terminals that are normally low voltage, due to equipment breakdown. Be careful when measuring low voltages in equipment containing high voltage circuits.
- f. Do not make resistance measurements with power on.
- g. Do not work within the equipment without the presence of a person who is capable of rendering aid, and who is familiar with the procedure for emergency shutdown of the equipment.

PRECAUTIONS WHEN MEASURING HIGH VOLTAGE POTENTIALS

Observe the following precautions when measurements must be performed on circuits with potentials over 48 volts.

- a. Do not measure potentials over 48 volts without the presence or assistance of a person who is capable of rendering aid, and who is familiar with the procedure for emergency shutdown of the equipment.
- b. Be sure you are not grounded when you are adjusting equipment or using measuring equipment. Stand on a rubber mat or other insulator if possible. Be sure the equipment area is clean and dry. In general, use only one hand when servicing live equipment.
- c. If a test meter must be held or adjusted while voltage is applied, ground the case of the meter before starting a measurement. Do not touch the live equipment or personnel working on live equipment while holding the meter. The “common” terminal on some A/C electronic voltmeters is at ground potential; never connect the “common” terminal to any point above ground potential.
- d. High-voltage, high-capacitance capacitors should be discharged before servicing is started.



WARNING! Discharging must be done carefully and judiciously. First ascertain whether there is a built-in bleeder network. If so, wait a minute or two for the capacitor to discharge through the network. Otherwise, use an external discharge network. This is most important in the case of high voltage or high capacitance capacitors. If one terminal is connected to ground, connect the discharge network between the other terminal and ground. If neither terminal of the capacitor is grounded, connect the network across the capacitor terminals. Connecting a short circuit across the terminals is not recommended. Doing so can produce extremely high currents and a flash which can injure the eyes, vaporize metals, and cause burns.

PRECAUTIONS WHEN WORKING ON ENERGIZED EQUIPMENT

When it is necessary to work on energized equipment, think ahead and anticipate every hazard. Never work alone on energized equipment.

Interlock switches are installed on some of the doors and panels to break the power circuits when the enclosure is entered. When it is necessary to work within such an enclosure on energized equipment, the interlock may be bypassed. Extreme caution should then be exercised, as dangerous voltages are present within the unit.

AC POWER CIRCUITS

Equipment obtaining power from a secondary distribution system should be grounded at all times by means of a third grounding wire on the power lines. Equipment permanently wired to a secondary distribution system should also be grounded separately by connection to a grounding bus or ground rod with a sufficiently large conductor to handle the current expected if the secondary source is accidentally shorted to the equipment.

The ground wire should be protected from mechanical damage and periodically inspected for good physical condition.

Personnel should never depend on a switch to remove power from equipment. If the equipment is connected to the secondary distribution system by means of a power cable, detach the cable from the receptacle before attempting any repairs or removal of chassis.

If the equipment is permanently wired to the secondary distribution system, remove the main fuses or open the power switch. Attach a suitable warning tag to the switch which will warn personnel not to operate the equipment; only the person who originally attaches the warning tag should be authorized to remove it.

RESUSCITATION

Personnel working with or near high voltage should be familiar with modern methods of resuscitation. Such information and training is available from the Red Cross or local emergency response personnel such as the police and fire departments.

DESCRIPTION

The IED1100 is an integrated control system containing a micro-controller with integrated storage media, data network interface, and an audio network interface. The IED1200 includes the same internal hardware with the addition of logic input ports and relay outputs. The system functions performed by the unit are determined by the software configuration provided with the unit. Using the 1000vACS software platform, the following configurations are available for purchase.

IED1100ACS-32	This configuration includes an IED1100 unit bundled with the Announcement Control System software configuration. This unit provides an announcement controller with built-in message functionality. This configuration includes a license to use up to 32 zone outputs with the option to upgrade to 64, 128, or unlimited zone outputs. The system has the ability to support up to two (2) channels of VoIP for telephone paging.
IED1200ACS-32	This configuration includes the IED1200 unit with the same software functions of the IED1100ACS-32 with addition hardware functionality. It includes the ability to read contact closure inputs to trigger various functions as well as provide relay outputs to control external devices.
IED1100MSG	This configuration includes the IED1100 unit bundled with the Message Server software configuration. This unit provides an expansion of the messaging capability of a system using an IED1100ACS or IED1200ACS. It will also function as a messaging device in systems that use the 1000vACS software hosted on a server-based platform.
IED1200MSG	This configuration includes the IED1200 unit with the same software functions as the IED1100MSG with the addition of logic inputs and relay outputs.
IED1100TEL	This configuration includes the IED1100 unit bundled with SIP Telephone Interface software. This unit provides an expansion of the VoIP telephone interface capacity of a system using the IED1100ACS or IED1200ACS. It has a maximum capacity of eight (8) simultaneous telephone interface lines.

CONNECTIONS

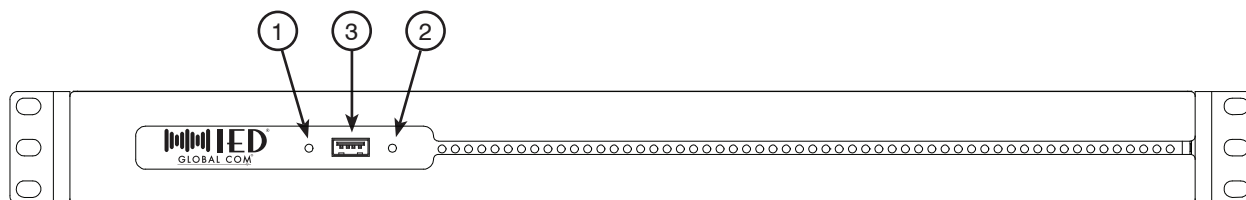


Figure 1 - IED1100 / IED1200 Front View

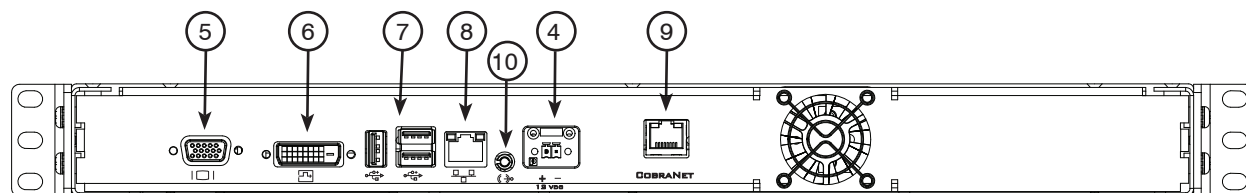


Figure 2 - IED1100 Rear View

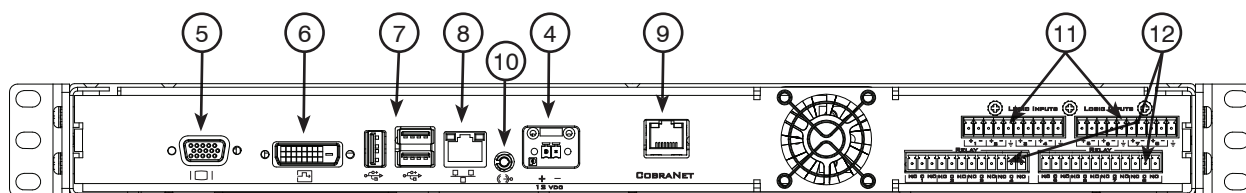


Figure 3 - IED1200 Rear View

1. Power LED

This LED will illuminate when the unit is powered on.

2. HD LED

This LED will flash to indicate activity when the unit is accessing the internal storage drive.

3. USB Port

This USB 2.0 compliant port is located on the front panel to provide a convenient place to connect an external flash storage device for file transfers.

4. Power

This connector is used to connect the unit to either the included single IED1112PSD power supply module or the IED1112PS rack-mount power supply. This 12VDC jack accepts a 2-pin Phoenix plug with 3.81mm spacing.

5. VGA Monitor Out

This analog video output is used to attach a monitor to the unit. It supports resolutions up to a maximum of 2048 x 1536 (QXGA) at 75Hz refresh rate.

6. DVI-D Monitor Out

This digital video output (DVI 1.0) is used to attach an external monitor that supports digital video. It supports a maximum resolution of 1600 x 1200 (UXGA)

7. USB Ports (3)

Use these three USB 2.0 compliant ports to connect a keyboard and mouse to the unit. The remaining port can be used to attach an external storage device for system backup or file transfers.

8. Control Network

This 10/100/1000 Mb/s Ethernet LAN port is used to connect the unit to the network using a standard RJ45 connector. This port transmits and receives control data only. The digital audio from the device is transmitted using the audio network port. Two LEDs are provided to indicate status as shown in the table below.

LED	State	Condition
Link (left)	Off	LAN link not established
	Green (solid)	LAN link is established
	Green (blinking)	LAN activity occurring
Speed (right)	Off	10 Mb/s data rate
	Green	100 Mb/s data rate
	Yellow	1000 Mb/s data rate

9. Audio Network

This 100 Mb/s Ethernet LAN port is used to connect the digital audio channels of the device to the network using a standard RJ45 connector. Two LEDs are provided to indicate the status as shown in the table below.

Condition	Left LED	Right LED
Conductor	Flashing Orange	Flashing Green
Performer	Solid Orange	Flashing Green
Fault	Flashing Orange	Flashing Orange

10. 1/8" Mini Phone Connector

This connector is not used.

IED1200 Only

11. Logic Inputs

Eight (8) logic inputs provide a simple method to interface the IED1200 to other systems such as fire alarm panels, building management systems, security systems, etc.. The function of each input is programmed in the system software.

12. Relay Outputs

Eight (8) dry contact relay outputs are provided to send signals from the IED1200 to other systems such as fire alarm panels, building management systems, security systems, etc.. Each relay is programmed in the system software. Relays can be programmed to act as zones and trip each time an announcement or message is active for that zone. Relays can also be used to provide a closure when there is a fault condition present in the system.

IED1100/1200 INSTALLATION



WARNING! Before performing the following procedure, review the safety instructions on the previous pages.

NOTE: This equipment is intended for installation in a restricted access location.

UNPACKING AND PREPARING THE UNIT

Unpack the unit from its shipping carton and identify any accompanying components that may have been included. Attach the rack ears as shown in Figure 4 to allow the unit to be mounted in a standard 19" equipment rack. Adjust the ear positions so the front of the ear is even with the front of the unit and tighten the screws securely.

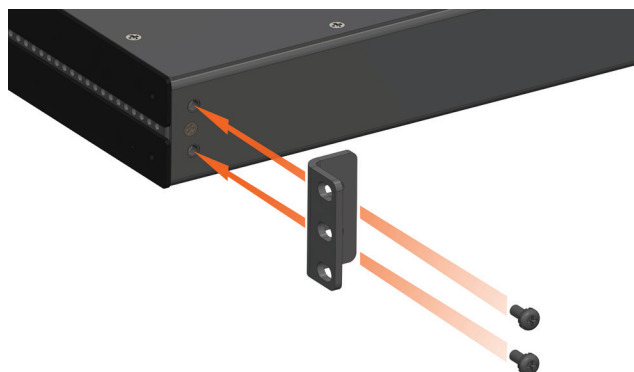


Figure 4 - Attaching Rack Mount Ears to the Unit

Two types of external 12VDC power supplies are available. The IED1112PSD is an in-line power supply module that provides power to the unit for situations that do not require power supply redundancy. The IED1112PS is a rack-mount power supply unit with optional redundant power supply modules to provide uninterrupted power to the unit should a supply fail.

If the unit will be used with the IED1112PS, locate the adaptor cable that will be used to connect the two units. If the unit will use the IED1112PSD in-line power supply, then locate this unit and prepare it for installation as shown later in this manual.

INSTALL UNIT INTO A RACK

The IED1100/1200 requires one rack unit (1 RU) of available space and a recommended mounting depth of 18" to allow adequate clearance for cabling. Select a location in the 19" rack for the unit based on proximity to the rack mounted 12V power supply system, keyboard and monitor or a KVM (keyboard/video/mouse) switch unit. Mount the unit using suitable screws for the rack being used, two per rack mount ear. Please refer to any safety and installation instructions that came with the rack prior to assembly.

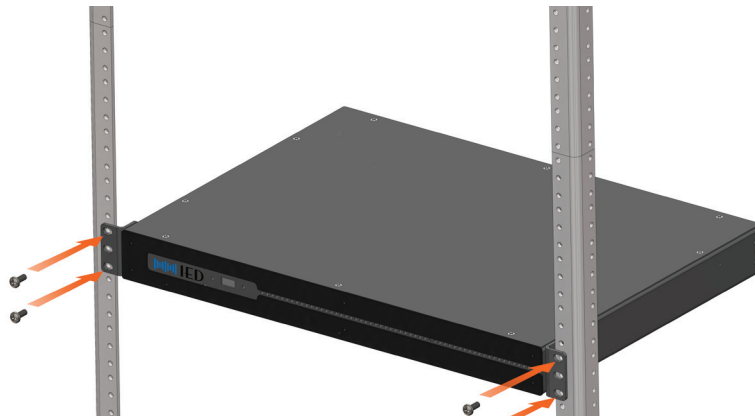


Figure 5 - Mounting Unit in a Rack

OPTIONAL – CONNECT KEYBOARD, MOUSE AND MONITOR

The unit may be connected to keyboard, mouse and monitor either directly or via a KVM switch shared with other devices in the rack.

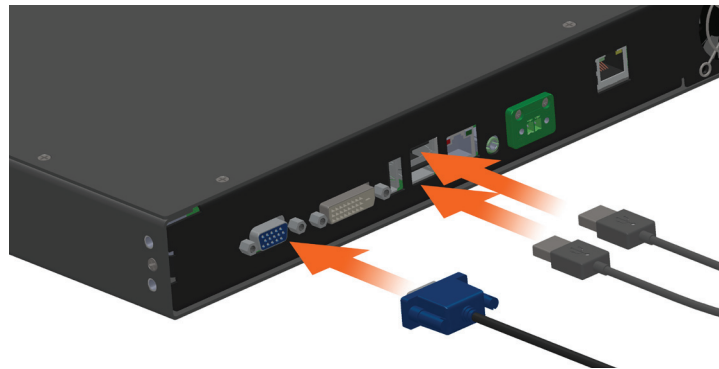


Figure 6 - Connecting Keyboard, Mouse and Monitor

Connect the keyboard and mouse to two of the available USB ports on the back of the unit. Connect the monitor to either the VGA output (15-pin D shell connector) or the DVI-D output on the back as appropriate for the type of monitor being used.

CONNECT NETWORK CABLES



Figure 7 - Connecting Network Cables

The unit has two Ethernet ports located on the rear of the unit. Both ports must be connected for proper operation. One is used for control and data while the other is dedicated strictly for digital audio. Connect both ports to available Ethernet switch ports using a suitable Cat-5e or Cat-6 jumper cable. The switch ports should be configured for auto-negotiation 10/100 or 10/100/1000.

CONNECT LOGIC AND RELAY I/O (IED1200 ONLY)

The IED1200 provides eight (8) logic sensor inputs and eight (8) dry contact outputs that can be used to trigger announcements, mute the system, provide control to external systems, or indicate a fault status. As required for the application, attach logic input lines and relay output lines to the terminal blocks provided, as shown in Figure 8 and Figure 9.

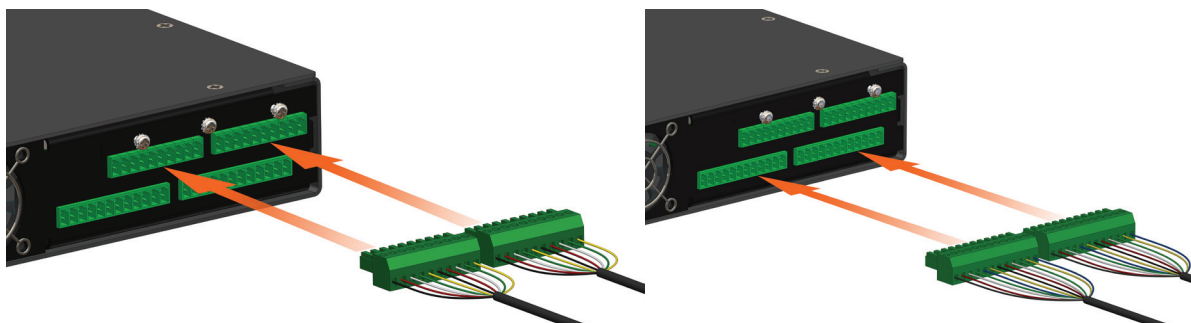


Figure 8 - Connecting Logic and Relay Lines

Each logic input is isolated and terminations are made by connecting the signal to the + terminal while using the – terminal for the return path to the signaling device. Pins 5 and 10 on each connector provide a reference to chassis ground. Refer to Figure 9 for details on the logic and relay terminals.

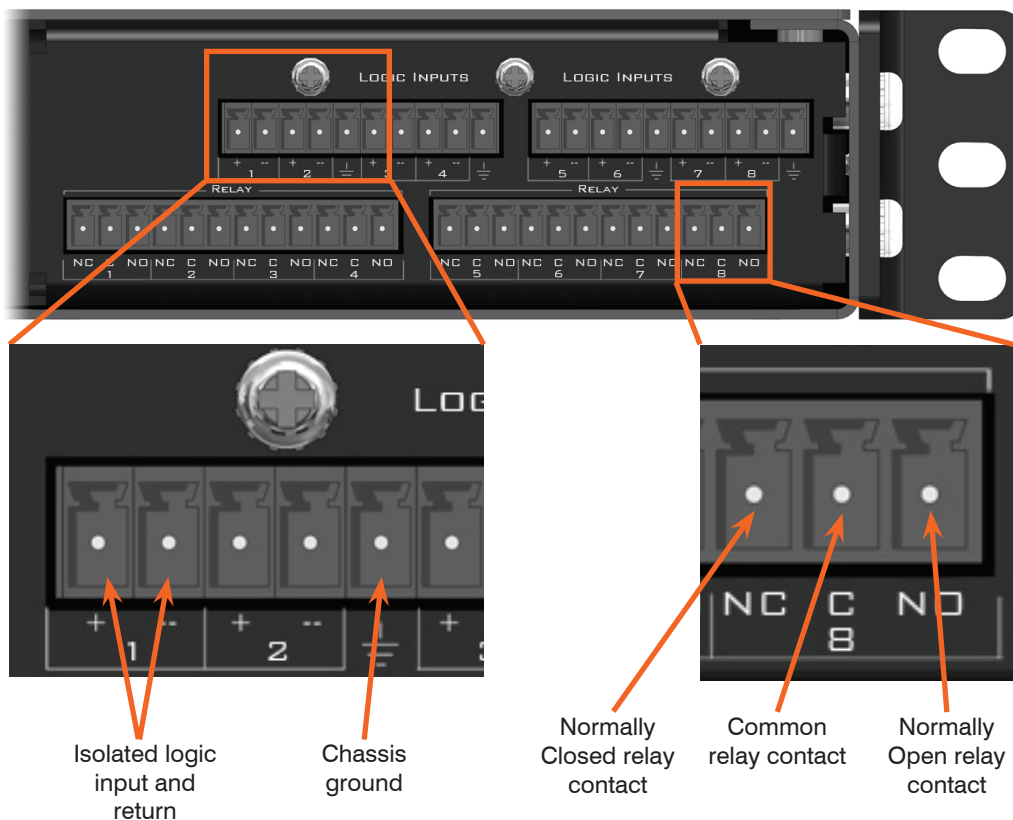


Figure 9 - Logic and Relay Connector Detail

CONNECT POWER PLUG



Figure 10 - Connect 12V Power Plug

Connect the cable from the IED1112PSD in-line 12V power supply or the IED1112PS rack mount 12V power supply system to the power connection on the back of the unit. If main power is present, the unit will immediately boot up. The fan will run and the power LED on the front panel will illuminate.

COMPLETE UNIT CONFIGURATION

Once the unit is booted up, complete the system configuration using the supplied configuration software. This is accomplished using either a keyboard, mouse and monitor connected directly to the unit or via remote connection through the network. Refer to the appropriate user guides for the specific model configuration to complete the unit setup.

SPECIFICATIONS

ELECTRICAL, ANALOG

1. Supply Voltage 12V DC
2. Rated Input Current 2 Amps Max (24W)
3. Relay Contact Rating 1A @ 30VDC Max

MECHANICAL

1. Height (4.4 cm) 1.75"
2. Width (without rack mount ears) (43.2 cm) 17"
3. Depth (31.1 cm) 12.25"
4. Weight (4.92 kg) 10.85 lb..

ENVIRONMENTAL

1. Operating Temperature Range (+32 °F - +95 °F) 0 °C - +35 °C
2. Storage Temperature Range (-4 °F - +158 °F) -20 °C - +70 °C

CONNECTORS

1. Power 2-pin Phoenix, 3.81mm spacing with locking screws
2. USB 3 Rear / 1 Front
3. Ethernet (2) Digital Audio (100Mbps) Control (10/100/1000 Mbps)
4. Video (2) VGA / DVI
5. Audio Out 1/8" Stereo Jack
6. Opto Isolated Logic Inputs (typical of 2) 10-pin Phoenix, 3.81mm spacing
7. Relay Outputs (typical of 2) 12-pin Phoenix, 3.81mm spacing

COMPLIANCE

1. SAFETY:
 - UL60950-1 (Ed.2) Listed
 - CAN/CSA C22.2 No. 60950-1-07 (Ed.2) Certified
 - IEC 60950-1: 2005; AM 1:2009
 - EN 60950-1:2—6/A11:2009/A1:2010
 - CB Certificate
2. FCC / EMC:
 - CFR, Title 47, Chapter I, Part 15 Subpart B
 - ICES-003, Issue 4, 2004
 - AS/NZS CISPR 22: 2005
 - CISPR 22 (Ed.5): 2005 +A1 (EN 55022: 2006 +A1)
 - CISPR 24 (Ed.1): 1997 +A1, A2 (EN 55024:1998 +A1, +A2)
 - IEC 61000-3-2 (Ed.3): 2005, +A1,A2 (EN 61000-3-2:2006)
 - IEC 61000-3-3 (Ed.2): 2008 (EN 61000-3-3:1995 +A1, +A2)

FCC NOTICE

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

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